

What we claim and desire to secure by Letters Patent

is:

1. An information recording apparatus, comprising:  
a vacuum chamber;

an energy beam generator partially enclosed in the vacuum chamber for emitting an energy beam for recording information on a recording medium;

a spindle disposed in the vacuum chamber for rotating the recording medium, said spindle being driven to rotate by a spindle motor;

a movable holder disposed in the vacuum chamber for carrying the spindle motor and the spindle;

a feed motor unit connected to the movable holder for linearly moving the spindle in a vacuum atmosphere within the vacuum chamber; and

a common base member;

wherein the holder, the vacuum chamber, and the energy beam generator are fixed to the common base member.

2. The information recording apparatus according to claim 1, wherein the common base member has the shape of a plate.

3. The information recording apparatus according to claim 1, wherein the vacuum chamber and the energy beam generator are fixed to the common base member from opposite sides thereof.

4. The information recording apparatus according to claim 3, wherein the energy beam generator extends into the vacuum chamber through an opening defined in the base member, the energy beam generator being pivotable to uncover the opening.

5. The information recording apparatus according to claim 4, wherein the spindle motor is included in a detachable unit which is mounted in the holder in alignment with the opening in the base member.

6. The information recording apparatus according to claim 1, further comprising:

a connecting rod extending between the holder and the feed motor unit, the feed motor unit being mounted on the common base member outside the vacuum chamber, the connecting rod extending through an aperture defined in a wall portion of the vacuum chamber; and

a flexible sleeve element surrounding the connecting rod outside the vacuum chamber and being sealingly attached to the feed motor unit and the wall portion of the vacuum chamber.

7. The information recording apparatus according to claim 6, wherein the connecting rod has an interior space extending between the ends of the rod, the ends being sealingly connected to the holder and the feed motor unit, respectively.

8. The information recording apparatus according to claim 1, wherein the holder defines an atmospheric cham-

(continued)

(continued claim 8)

ber enclosing the spindle motor, the spindle extending from the spindle motor into the vacuum chamber through a magnetic fluid seal producing means, and wherein the spindle comprises a spindle portion of essentially non-magnetic material extending from the magnetic seal producing means into the vacuum chamber and a surface portion of magnetic material on a level with the magnetic seal producing means.

9. The information recording apparatus according to claim 8, wherein the surface portion is formed by a sheet of magnetic material attached to an elongated stem of said essentially non-magnetic material.

10. The information recording apparatus according to claim 1, further comprising a distance sensor mounted on a beam-emitting end of the energy beam generator in the vacuum chamber.

11. The information recording apparatus according to claim 10, wherein the distance sensor has a sensor area defining a central through-hole, and wherein the distance sensor is mounted with the through-hole in alignment with a beam outlet of the beam-emitting end.

12. The information recording apparatus according to claim 10, wherein the distance sensor is arranged to determine the distance to the recording medium via a level of impedance between the sensor and the recording medium.